

AVERSHIN, S.G., prof., doktor tekhn. nauk, red.; BLOKHA, Ye. Ye., gornyy inzh., red.;
BUTKEVICH, T.V., gornyy inzh., red.; KRIKUNOV, L.A., gornyy inzh., red.;
LISHUTIN, B.G., gornyy inzh., red.; OGLOBLIN, D.N., prof., doktor
tekhn. nauk., red.; OMEL'CHENKO, A.N., kand. tekhn. nauk, red.;
RYZHOV, P.A., prof., doktor tekhn. nauk.; GLAZENAP, K.K., inzh., red.;
KONSTANTINOVA, L.F., inzh., red.; NIKITINA, M.M., inzh., red.;
NOVOSELOVA, Yu. A., inzh., red.; SHUL'GO, Ye. I., inzh., red.; YAKOVLEV,
M.G., inzh., red.; RASHKOVSKIY, Ya.Z., inzh., red.; STEL'MAKH, A.N.,
red. izd-va.; BERLOV, A.P., tekhn. red.; NADEINSKAYA, A.A., tekhn. red.

[Transactions of the All-Union Scientific and Technical Conference
on Mine Surveying July 17-23, 1956] Trudy vsesoiuznogo nauchno-
tekhnicheskogo soveshchaniya po markshaiderskomu delu 17-23 iulia
1956 g. Moskva, Ugletekhnizdat, 1958. 743 p. (MIRA 11:12)

1. Vsesoyuznoye nauchno-tekhnicheskoye soveshchaniye po
markshaiderskomu delu. 1956.

(Mine surveying)

MILOGRADOVA, Ye.I.; MALAKHOVA, P.T.; KONSTANTINOVA, L.G.

Bacteria accompanying the mass Chlorella culture and their role
in the biosynthesis of vitamin B₁₂. Uzb. biol. zhur. 9 no.5:
18-20 '65. (MIRA 18:10)

1. Institut botaniki AN UzSSR.

MALAKHOVA, P.T.; KONSTANTINOVA, L.G.

Microflora of the mass culture of Chlorella. Uzb. biol. zhur.
9 no.2:24-28 '65. (MIRA 18:5)

1. Institut botaniki AN UzSSR.

133-8-13/28

AUTHORS: Konstantinova, L.I., Lemlekh, Ya.M., and Frenkel', L.A.

TITLE: Gaseous preheating of rolls for rolling thin sheets.
(Gazovyy podogrev tonkolistovykh valkov pered ustanovkoy).

PERIODICAL: "Stal'" (Steel),¹⁷ No.8, 1957, pp.724-727 (USSR).

ABSTRACT: Preheating of rolls for rolling thin sheets before assembling in a rolling stand using a gas fired heating installation and the influence of such preheating on the durability of rolls and the output were investigated. The installation for preheating was described earlier (Ya. M. Lemlekh, "Sbornik Ratsionalizatorskikh Predlozheniy, Vnedrennykh v Proizvodstvo," Ts.IIN MChM, vyp.54, 1955). The distribution of thermocouples used for measuring roll temperatures is given in Fig.1. Heating of rotating (1 rpm) and stationary rolls was tested. Temperatures of experimental stationary and rotating rolls and the waste gas in various points of the heating chambers (A), pressure in the chamber and suction in flues (B), pressure of producer gas before the burner (V) are given in Figs.2 and 3 respectively. Changes in the distribution of temperatures across the roll from surface to centre at given time intervals are given in Fig.4. It was found that with preheating of rolls the output increases by 8-10% with simultaneous improvement

Card 1/2

ACCESSION NR: AP4019809

S/0279/64/000/001/0078/0084

AUTHOR: Kasatkina, N. A. (Moscow); Vigdorovich, V. N. (Moscow); Nikitina, Z. M. (Moscow); Uvarova, E. S. (Moscow); Konstantinova, L. I. (Moscow)

TITLE: Behavior of impurities during the crystallization refining of indium

SOURCE: AN SSSR. Izv. Metallurgiya i gornoye delo, no. 1, 1964, 78-84

TOPIC TAGS: indium, indium refining, crystallization refining, impurity elimination, solid phase soluble impurity, solid phase insoluble impurity, zone refining

ABSTRACT: A systematic study was made of the behavior of impurities and the conditions present during their elimination from indium in the process of crystallization refining from molten material. Indium specimens with a known impurity content (Cd, Sn, Pb, Hg, Fe, Ni, Cu, Ag) were subjected to zone refining in a nitrogen stream on equipment with one or two heating zones. Crystals extracted from the smelt in a vacuum furnace, at a residual pressure on the order of 10^{-3} mm Hg, were 100-115 mm long and had a diameter of about 10 mm. The rate of extraction ranged from 0.3 to 2 mm/min. The evaluation of the experimental results employed the author's theoretical classification of impurities present in indium as either easy or difficult to eliminate. The former include most of the impurities present, are characterized by poor solid-solution solubility in indium and have distribution co-
Card 1/2

KISELEVA, N.S.; SOKOVA, O.I.; KONSTANTINOVA, L.N.; POGOSYANTS, Ye.Ye.

Chromosome sets and the rate of tumor growth of two substrains
of the ascitic hepatoma of rats. Vop. onk. 11 no.4:61-66 '65.

(MIRA 18:8)

1. Iz laboratorii tsitogenetiki (zav. - doktor biol. nauk Ye.Ye.
Pogosyants) Instituta eksperimental'noy i klinicheskoy onkologii
AMN SSSR (direktor - deystvitel'nyy chlen AMN SSSR prof. N.N.
Blokhin).

KONSTANTINOV, G.N.; KONSTANTINOVA, L.S.; FILATOV, V.A.

Determining the zero point of the level of magnetic anomalies.
Geol.i geofiz. no.5:91-92 '61. (MIRA 14:6)

1. Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki
i mineral'nogo syr'ya, Novosibirsk.
(Magnetic anomalies)

Konstantinova, L.S.

PLANS 1 BOOK REPLICATION 800/587

USSR. Ministerstvo svyazi. Tekhnicheskoye upravleniye
Vozdukhovoye elektrosvyazi i elektromekhaniki. Informatsionnyy sbornik.
(See Electro-Communication and Power Supply Equipment: Collection of
Information) Moscow, Svyaz'izdat, 1979. 100 p. (Seriya: Tekhnika svyazi)
13,300 copies printed.

Orig. Ed.: V.A. Lipkin; Eds.: Ye.N. Korshakov and N.M. Kondratyuk;
Tech. Ed.: B.P. Karablin.

PURPOSE: This collection of articles is intended for technical personnel of
the Ministry of Communications USSR and its subordinate telecommunication
establishments.

COVERAGE: The articles in this collection describe various new types of Soviet
equipment used in electrical communications systems. These include:
broadcast studio equipment, mobile radio amplifiers, transformers, cable
reels, converters, rectifiers, and noteborders. No personal names are
mentioned. References accompany the articles in footnotes.

Notes, Ch.M., and B.I. Kuznetsov, A.D. Ch. "Working Clock" Unit
This article provides telephone time service. The authors describe its
principle of operation, and the block diagram of the unit. 24

Notes, Ch. M. Ty - 200 line transformer with lightning arrester.
This power transformer is designed for operation with overhead
transmission lines of wire broadcasting systems. The author describes
the diagram and design of the transformer. 31

Philippov, V.N. Subscriber Telegraph Station of the A24-M Low Capacity
System
This station is designed for installation in oblast or rayon
communication centers of the subscribers' automatic telegraph system.
Its capacity is 10 subscribers' installations and 3 voice-frequency
channels. 34

Dud, V.G. VPS Lead-In Cable Cabinet Rack
The author lists a variety of racks for connecting balanced cables
of varying capacity. A table indicates the types of mounting plates
for each rack. The author also describes circuit diagrams and opera-
tion of the rack assemblies. 41

Philippov, V.N. VS-20 Lead-In Rack
The author briefly describes the structure and operation of this rack,
which serves for connection and communication of communication cables
and overhead lines, and for protection of station equipment. 46

Proskobly, M.Y., G.A. Volichen, and V.D. Shcherbakov. Constant Voltage
Direct Current Converters with Transformer-Rectifier
These converters provide power supply for communication equipment
by means of a single battery. The article also describes converter
operating principle, advantages and disadvantages, field of applica-
tion and components. The results of experiments with 3 types of con-
verters are shown in a table. 49

Golubev, L.S. VS-36/50 Rectifier Assembly
The rectifier serves as a power supply for equipment used in intra-
rayon and intra-oblast telecommunication and in dial telephony
systems. The author gives the circuit diagram and design of the assembly.
Diagram and structural details of the new board. 60

Konstantinov, L.S. EKU-1 Combined Switchboard
The switchboard connects local subscribers among themselves and connects
long distance lines with local telephone network subscribers and with
those of the automatic telephone system. The article describes circuit
diagrams of various combinations of connections, structural details of
the components and the assemblies as the whole. 66

Vigorechik, M.M. MS-1 Drilling Rig
The rig drills the holes for overhead line poles. The author describes
the functional diagram, design, and operation of the assembly. 68

AVAILABLE: Library of Congress

80/10/24

KONSTANTINOV, G.N.; KONSTANTINOVA, L.S.; SERGEYEV, V.O.

Methods for the conversion of a magnetic field in the upper
discontinuity as revealed by a study made in the western part
of the Siberian Platform. Trudy SNIIGGIMS no. 30a127-139 ' 64.
(MIRA 19:1)

KONSTANTINOV, G.N.; KONSTANTINOVA, L.S.

Interpretation of magnetic anomalies by the curves of a horizontal gradient of Z function. Trudy SNIIGGINS no.27:138-144 '62.

(MIRA 16:9)

1. Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki i mineral'nogo syr'ya.

(Magnetic prospecting)

KONSTANTINOV, G.N.; KONSTANTINOVA, L.S.

Calculation of pseudogravitational anomalies and the determination of the angle of slope in magnetization vector. Trudy SNIIGGIMS no. 27:165-170 '62. (MIRA 16:9)

1. Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki i mineral'nogo syr'ya.
(Magnetic anomalies)

SHAMOV, V.M.; KONSTANTINOVA, L.Ya.

Significance of types of higher nervous activity for understanding
some postoperative implications in the surgical clinic. Fisiol.shur.
(Ukr.) 2 no.3:47-54 My-Je '56. (MIRA 9:11)
(TEMPERAMENT) (OPERATIONS, SURGICAL)

KONSTANTINOVA, L. Ye.

Konstantinova, L. Ye. - "The effect of operation upon the prothrombin blood content,"
In the symposium: V. N. Shamov, Kiev, 1949, p. 179-87

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949)

KONSTANTINOVA, L. Ye.

70th anniversary of Vladimir Nikolaevich Shamov. Khirurgia, Moskva
no. 10:72-74 Oct 1952. (GLML 23:3)

1. Shamov is at present Learned Secretary of the work Opyt sovetskoy
meditsiny v. Velikoy Otechestvennoy voyne 1941-1945. [Experience of
Soviet Medicine during the Great Fatherland War of 1941-1945].

KONSTANTINOVA, L.Ye.

Results of duodenojejunostomy in chronic duodenal stasis. Vest. khir.
Grekona, Leningr. 72 no. 3:59-63 May-June 1952. (CLML 22:4)

1. Of the Department of the First Faculty Surgical Clinic (Head --
Prof. V. N. Shanov), Military-Medical Academy imeni S. M. Kirov.

SITENKO, V.M., prof. (Leningrad, K-9, ul. Lebedeva, d.10-b, kv.2);
KONSTANTINOVA, L.Ye.

Large cystic duct stump and its significance in the occurrence of
the so-called postcholecystectomy syndrome. Vest. Khir. 91 no.10:
12-18 0 '63. (MIRA 17:7)

1. Iz fakul'tetskoy khirurgicheskoy kliniki imeni S.P. Fedorova
(nachal'nik - prof. V.M. Sitenko) Voenno-meditsinskoy ordena
Lenina akademii imeni Kirova, Leningrad.

SAGORTSCHEW, B. [Zagorchev, B.]; KONSTANTINOVA, M.

The tartrate iron complexes and their use in separating Fe^{+++} -
from Fe^{++} -ions. Doklady BAN 15 no.7:747-750 '62.

1. Vorgelegt von Akademiemitglied D. Iwanoff [Ivanov, D.].

ZAGORCHEV, B.; KONSTANTINOVA, M.

The iron tartrate complexes and their utilization in the separation of ferriions from ferroions. Godishnik khim tekhn 8 no.2:73-79 '61 [publ. '62].

SCHEJTANOW, Ch. [Sheitanov, Kh.]; KONSTANTINOVA, M.; CAVDAROVA, R.
[Chavdarova, R.]

Automatic microcoulometric titration of bases. Doklady BAN 17
no. 8:721-724 '64.

1. Vorgelegt von Akademiemitglied D.Ivanov.

ALEKSEYEV, V.N., arkh.; KONSTANTINOVA, M.A., arkh.; LOPOVOK, L.I.,
kand. arkh.; MAKOTINSKIY, M.P., kand. arkh.; Prinimali
uchastiy: BOGUSLAVSKIY, A.I., inzh.; LIVSHITS, A.M., inzh.;
MASHINA, N.N., inzh.; ANDREYEV, V.S., retsenzent; BOTVINKIN,
O.K., doktor khim, nauk, prof., retsenzent; POSOKHIN, M.V.,
retsenzent

[Catalog of finishing materials and products] Katalog otdelech-
nykh materialov i izdelii. Moskva, Gosstroizdat. Pt.3. 1961.
(MIRA 18:4)
60 p.

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut no-
vykh materialov. 2. Rukovoditel' Arkhitekturno-stroitel'nykh
sektorom Vsesoyuznogo nauchno-issledovatel'skogo instituta
novykh stroitel'nykh materialov, Moskva (for Makotinskiy).
3. Rukovoditel' Sektorom tekhniko-ekonomicheskikh issledovaniy
Vsesoyuznogo nauchno-issledovatel'skogo instituta novykh
stroitel'nykh materialov, Moskva (for Boguslavskiy). 4. Chlen-
korrespondent Akademii stroitel'stva i arkhitektury SSSR (for
Andreyev, Posokhin).

KONSTANTINOVA, M.A., arkhitektor; AYRAPETOV, D.P., arkhitektor

Architectural and structural strip products made of polymer materials. Sbor. trud. VNIINSM no.7:127-142 '63.

(MIRA 17:11)

AINUSIMPON, (A.L.); AMUEL, N.Y.; SMITH, T.L.; FORTNIGHT, M.L.

The use of heavy water (D₂O) in the metabolism of plant and animal cells, cellular organelles, and proteins is being demonstrated. (MIR 1818)

1. In an early report, developed in 1964, it was shown that the use of heavy water in the metabolism of plant and animal cells is being demonstrated.

ARSENIEV, N.I.; KOZSLANTINOV, N.F.

Point of application of the inclusions action of high hydrostatic pressure on cells. TSitologiya 6 no.4:443-446 1974. (MIRA 18:8)

I. Institut tsitologii, Leningrad i Pribluchensky Institut AN SSSR, Leningrad.

ZENKEVICH, L.A.; KONSTANTINOVA, M.I.

Locomotion and the motor apparatus of Rotifera [English summary in
insert]. Zool.shur.35 no.3:345-364 Mr '56. (MIRA 9:7)

1.Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo universi-
teta imeni M.V.Lomonosova.
(Rotifera)

17(4)

AUTHOR:

Konstantinova, M. I.

SOV/20-125-3-60/63

TITLE:

Motion of the Pelagic Larvae of *Heteromastus filiformis* Clap. (Polychaeta) (Dvizheniye pelagicheskikh lichinok *Heteromastus filiformis* Clap. (Polychaeta))

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 3, pp 677-680 (USSR)

ABSTRACT:

The author refers to papers (Refs 1-7) dealing with the morphology of the locomotor apparatus and the types of motion with the aim of following the line of evolutionary variations from the low invertebrates up to the higher ones. The author was to continue this cycle in her paper. She restricted her investigations to the determination of the quantitative indices of the velocities of motion in different stages of the larvae mentioned in the title. The numerical data obtained by measuring were biometrically evaluated according to formulae (supplied by N. A. Plokhinskiy). On this basis the empirical curve of dependence of the absolute velocity of the larvae as dependent on their body length was plotted, taking growth and shape into account. Further, the curve describing the

Card 1/3

Motion of the Pelagic Larvae of
Heteromastus filiformis Clap. (Polychaeta)

SOV/20-125-3-60/63

dependence between relative velocity and body length was plotted (Fig 1). The shape of the newly hatched trochophore (Fig 1 a), of metatrochophore (Fig 1 b) and of nectochaeta (Fig 1 v) is described in connection with the type of motion of each of the stages mentioned. In *H. filiformis* body shape is constantly transformed in the course of the pelagic larval stages, from ball shape to cigar shape, under a simultaneous transformation of the ciliated apparatus. In this connection the larva undergoes a transformation from monotrochous to ditrochous type. The empirical curve describes the increasing absolute velocity of motion of the larvae. The relative velocity decreases from 5 to 2 conditioned units. Thus the relative velocity decreases by more than 50%, while the body length attains almost the four-fold of its former length during the same period. Difficulties arose in connection with comparing the above results with the data obtained by other authors. In spite of all the variety in the structure of the ciliated apparatus it is, however, always possible to discover a feature characteristic of the motion of the aquatic invertebrates: they rotate around their own axis, mostly in counter-clockwise

Card 2/3

Motion of the Pelagic Larvae of
Heteromastus filiformis Clap. (Polychaeta)

SOV/20-125-3-60/63

direction. This indicates a physiological functional similarity of all ciliated apparatus, independent of their location and structure. After pointing out the differences between *H. filiformis*, Infusoria, Turbellaria and rotatoria with respect to the absolute motion velocity the author arrives at the following conclusion: relative motion velocity and body size are in a reciprocal dependence. In other words, the numerical indices of velocity are in the case of Polychaeta larvae within the limits of the general laws of motion of groups so different with respect to their morphology as it is the case with Infusoria, Turbellaria and rotatoria. There are 1 figure and 7 references, 6 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

PRESENTED: December 19, 1958, by Ye. N. Pavlovskiy, Academician

SUBMITTED: December 11, 1958

Card 3/3

NOBLOVSKAYA, N.I.

Formation of **muscles** in the morphogenesis of *Harmothoe imbricata*
L. (Polychaeta). Dokl. AN SSSR 137 no. 1:232-235 Mr-Apr '61.
(MIRA 14:2)

L. Noblovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
Predstavleno akademikom Ye.N. Pavlovskim.
(Polychaeta) (Animal locomotion) (Morphogenesis)

KONSTANTINOVA, M. M.

A method for the preparation of ferritin free from cadmium. M. M. Konstantinova (Inst. Animal Morphol., Acad. Sci. U.S.S.R., Moscow, U.S.S.R.) *Lab Gen + Comparative*
(1954). — Pass one kg. of horse spleen through a meat grinder. Add 1500 ml distd. H₂O. Stir with a glass rod or a water bath with const. stirrer. The mixture is grossly coagulated proteins. While still hot, pass through coarse cloth and then through filter paper. For each 100 ml. of the filtrate add 35 g. of (NH₄)₂SO₄. Place in a cooler for 12-20 hrs. A light-brown ppt. forms. Decant supernatant fluid by careful and slow pouring. Wash ppt. with remove supernatant fluid as carefully as possible. Redissolve the ppt. in 100 ml. of 0.1N HCl previously boiled and cooled to room temp. A dark-brown soln. is formed when the ppt. is added. For each 100 ml. add, with constant stirring, 10 ml. of 10% CdSO₄. Within 24-48 hrs. a dark-brown ppt. forms. Centrifuge for 10-15 min. at 1000 r.p.m. Sep. the supernatant fluid and the ppt. Wash the ppt. of proteins cautiously and completely with distilled water. Wash with the mother fluid and water. The ppt. is judged to be free from admix. Wash the ppt. with crystals in distd. H₂O. Acidify with 0.1N HCl. Remove the CdCl₂ by a three-day dialysis. After this, no trace of Cd can be detected by chem. or physiol. means.
B. S. Levine

KONSTANTINOVA, M.M.:

KONSTANTINOVA, M.M.: "The effect of ferritin on blood pressure". Moscow, 1955.
Acad Sci USSR. Inst of Animal Morphology imeni A.N. Severtsov.
(Dissertations for the Degree of Candidate of Biological Sciences)

SO: Knizhnaya letopis' No 44, 29 October 1955. Moscow.

USSR / Human and Animal Physiology. Effect of Physical Factors. T-13

Abs Jour : Ref Zhur - Biologiya, No 1, 1959, No. 3975

Author : Grayevskiy, E. Ya.; Konstantinova, M. M.

Inst : AS USSR

Title : On the Absence of a Protective Influence of Histotoxic Hypoxia on Action of Ionizing Radiation

Orig Pub : Dokl. AN SSSR, 1957, 114, No 2, 289-292

Abstract : Suspensions of bacteria Escherichia coli, which remained for the duration of 1 hour in a solution of KCN 0.002 m or for the duration of 5 - 10 min. in an atmosphere of 95% CO and were subjected in the same medium to irradiation of 1000 - 20,000 r with the strength of the dose at 500 - 900 g/min., were disseminated in agar at 37°. After 24 hours, the count of colonies showed that both histotoxic agents, despite the defensive effect ascribed to them, inhibited the ability of irradiated

Card 1/2

*Inst. Animal Morphology im A.N Severtsov
AS USSR*

CONFIDENTIAL

COUNTRY : USSR V
 CATEGORY : Pharmacology and Toxicology. Cardiovascular Agents
 ABS. JOUR. : RZhBiol., No. 5 1959, No. 23200
 AUTHOR : Konstantinova, M. M.
 INST. :
 TITLE : On the Hypotensive Effect of Ferritin
 ORIG. PUB. : Patol. fiziologiya i eksperim. terapiya, 1958, 2, No 4, 33-38
 ABSTRACT : SN ferritin (F) possesses a hypotensive activity, which manifests itself only in case of pathologically increased arterial pressure, whereas an oxidized F exhibits no such activity. The hypotensive action of F is manifested in lower doses as compared with other hypotensive agents. The effect takes place after a latent period lasting 40 min to 2 hours. Upon repeated administration of F, the latent period of its action and the amount by which the pressure decreases are re-

Lab of General and Comparative Physiology
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CONFIDENTIAL
 APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824410018

COUNTRY : USSR V
 CATEGORY :
 ABS. JOUR. : RZhBiol., No. 5 1959, No. 23200
 AUTHOR :
 INST. :
 TITLE :
 ORIG. PUB. :
 ABSTRACT :
 cont'd : duced; the duration of the period of decreased pressure increases. F decreases the sensitivity of vessels to adrenalin, both in isolated organs (kidneys, rabbit's ear), as well as in animals with an increased pressure.

Cards: 2/2

SOV/20-122-3-16/57

On the Antiradiation Protective Effect of Substances Blocking the Transport of Hemoglobin

was determined for a time of 30 days. The amount of methemoglobin distinctly grows already 5 minutes after the introduction of sodium nitrite, and it reaches its maximum value (65 %) 40-60 minutes after the introduction of sodium nitrite. The content of methemoglobin maintains this value for 1 - 1.5 hours. A distinct protective effect of sodium nitrite cannot be observed before 20 minutes after its introduction into the organism. The maximum of the protective effect was observed 40 - 60 minutes after the introduction. The period of the maximum intensity of the protective action corresponds to the period of the highest content of methemoglobin in the blood. In the experiments with carbon monoxide, the coincidence of the curves of the hemoglobin inactivation and of the survival rate was still better. A connection between the quantity of the inactivated hemoglobin and the intensity of the protective effect was found. The protection due to carbon monoxide is more efficient. The following conclusion may be drawn from the data discussed in this paper: The protective effect of the prophylactic introduction of sodium nitrite or carbon monoxide before and during the irradiation is caused by the hypoxia due to the suppression of the oxygen transport. There

Card 2/3

SOV/20-122-3-16/57

On the Antiradiation Protective Effect of Substances Blocking the Transport of Hemoglobin

are 2 figures and 14 references, 5 of which are Soviet.

ASSOCIATION: Institut morfologii zhivotnykh im. A. N. Severtsova Akademii nauk SSSR
(Institute of the Morphology of Animals imeni A. N. Severtsov, Academy of Sciences, USSR)

PRESENTED: May 22, 1958, by A. I. Oparin, Academician

SUBMITTED: May 15, 1958

Card 3/3

24(0)

AUTHORS:

Shapiro, I. M., Konstantinova, M. M.

SOV/20-125-3-54/63

TITLE:

On Chromosome Aberrations and the Mitotic Activity Subsequent to the Effect of Ionizing Radiation Under Protection by Carbon Monoxide (On the Problem of Reparation of Radiation Injuries) (O khromosomnykh aberratsiyakh i mitoticheskoy aktivnosti posle vozdeystviya ioniziruyushchey radiatsiyey v usloviyakh zashchity okis'yu ugleroda (K probleme reparatsii luchevogo povreshdeniya))

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 3, pp 654-657 (USSR)

ABSTRACT:

Prophylactic application of several substances increases the percentage of survival of irradiated animals and accelerates the regeneration of the injured tissue. Thus, in the case of hypoxia and anoxia (Refs 1, 2) the number of chromosome aberrations decreases after relatively small doses of radiation. The effect exercised by the two mentioned factors upon the restoration of the capacity of cell division is, however, still insufficiently investigated. This is the reason for the interest in the investigation of the accelerated regeneration of tissue (which is probably connected with the higher percentage of survival) in animals irradiated with a fatal

Card 1/3

On Chromosome Aberrations and the Mitotic Activity SOV/20-125-3-54/63
Subsequent to the Effect of Ionizing Radiation Under Protection by
Carbon Monoxide (On the Problem of Reparation of Radiation Injuries)

dose under protection. It is the aim of the present paper to investigate the ways of action of a group of substances the mechanism of effect of which is brought into relation with the "oxygen-effect". In this case carbon monoxide was concerned. In the 3 experimental series mice were irradiated with:

I. γ -rays from Co^{60} (dose 900 r, intensity of the dose 565 r/min). II. 15 minutes before irradiation the mice were exposed to an atmosphere with 0.5% by volume of CO. Under those conditions the blood of the mice contains 72% carboxy hemoglobin. After 30 days 25% less fatal cases occurred as compared to 100% in control (Ref 3). III. Mice were kept in a similar atmosphere with CO for 17 minutes but not irradiated. After 10 hours all experimental animals were killed and the mitoses in the cornea were counted with respect to the chromosome aberrations. Tables 1 and 2 show the results. They reveal that towards the 8th day after irradiation (which corresponds to the average duration of life of the animals in the I. series) the number of the formed cells amounted in the case of those in hypoxia to three times the number of those

Card 2/3

On Chromosome Aberrations and the Mitotic Activity SOV/20-125-3-54/63
Subsequent to the Effect of Ionizing Radiation Under Protection by
Carbon Monoxide (On the Problem of Reparation of Radiation Injuries)

animals that were not protected. There are good reasons for the assumption that the differences in the intensity of regeneration comprise also the bone marrow, intestines, skin and other organs (Ref. 7). Thus, it is possible to explain the increased number of surviving animals protected by CO which is due to the utilization of protective substances causing the state of hypoxia during irradiation. V. Yu. Urbakh assisted in the discussion of the work and the statistical evaluation of the experimental results. There are 2 tables and 7 references, 3 of which are Soviet.

ASSOCIATION: Institut morfologii zhivotnykh im. A. N. Severtsova Akademii nauk SSSR (Institute of Animal Morphology imeni A. N. Severtsova of the Academy of Sciences, USSR)

PRESENTED: December 4, 1958, by I. I. Shmal'gauzen, Academician

SUBMITTED: November 28, 1958

Card 3/3

81420

S/020/60/132/06/57/068
B011/B003

21.7200

AUTHOR:

Konstantinova, M. M.

TITLE:

Tissue Hypoxia² as a Mechanism of the Anti-radio Protection /9
Effect of Adrenalin, Heroin, and Morphine

PERIODICAL:

Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 6,
pp. 1427 - 1430

TEXT: By way of introduction, the author discusses the hypothesis of protection against radiation by a lack of oxygen in cells and tissues. The three neurotropic alkaloids mentioned in the title are looked upon as the strongest protectives against radiation. Experimental verifications of this mechanism, however, are missing in the data available. The author intends to solve this problem in the paper under review. Since only the "hypoxic" concept of the mechanism of protection is well-founded, the author studied the problem as to whether the protective effect of neurotropic substances is in connection with their ability to reduce the oxygen tension in tissues. For this reason, he studied the influence of all three alkaloids on the oxygen tension and their protective effect.

Card 1/4

Tissue Hypoxia as a Mechanism of the Anti-radio
Protection Effect of Adrenalin, Heroin, and
Morphine

81420
S/020/60/132/06/57/068
B011/B003

White mice were used as experimental animals. The O_2 tension in the tissue was determined polarographically in vivo. A chlorine-silver electrode was used. Since the method employed does not permit to determine the absolute O_2 content, the recorded current was expressed in per cent of the initial² level. The author ascertained the change in the content of O_2 in the liver, milt, and muscles after a hypodermic injection of 0.1 mg of adrenalin, 3 mg of heroin, or 1.25 mg of morphine in 0.5 ml of distilled water per animal. Other animals were simultaneously subjected to γ -radiation of Co^{60} (dose 900 r, dosage 450 r (min)) for 2 min at various points of time after introduction of the substance mentioned. The survival of mice for thirty days was regarded as a criterion for the efficiency of protection. Next, the author compared the change in radiation sensitivity with the change in O_2 tension as dependent on the period passed between introduction of² the protective substance and irradiation. Table 1 and Fig. 1 show results from which it follows that the O_2 content was considerably reduced in the tissues by the substances

Card 2/4

81420

Tissue Hypoxia as a Mechanism of the Anti-
radio Protection Effect of Adrenalin, Heroin,
and Morphine

S/020/60/132/06/57/068
B011/B003

ASSOCIATION: Institut morfologii zhivotnykh im. A. N. Severtsova
Akademii nauk SSSR (Institute of Animal Morphology imeni
A. N. Severtsov of the Academy of Sciences, USSR)

PRESENTED: February 6, 1960, by A. I. Oparin, Academician

SUBMITTED: February 4, 1960

Card 4/4

82526

S/020/60/133/04/30/031
B016/B067

5.3900

AUTHORS: Grayevskiy, Ye. Ya., Konstantinova, M. M.

TITLE: Study of the Mechanism of the Radioprotective Action of
Some Sulfur Containing Substances 79 ✓

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 4,
pp. 969-972

TEXT: The authors present five hypotheses on the radioprotective effect of some sulfhydryls and some thiuronium compounds which are structurally related with them. These substances are one of the most effective radioprotective substances. The data of publications do not allow the establishment of a connection between the radiation resistivity of an organism and the state of its regulating systems. The protective effect has approximately the same degree in biological objects at different stages of development. The authors mention further inadequate explanations of the protective effect (Refs. 11, 15). The assumption that the protective effect of sulfur containing compounds is due to the so-called "oxygen effect" (Refs. 10, 16-25) is the most probable. In conclusion, the authors state that the

Card 1/4

82526

Study of the Mechanism of the Radioprotective
Action of Some Sulfur Containing Substances

S/02060/133/04/30/031
B016/B067

hypothesis according to which the protective effect of the substance concerned is based on the anoxia in the organism, that it is also based on rather contradictory data, and that it must not be regarded as proved. The authors wanted to explain the role of the level of molecular oxygen in tissues for the protective effect. For this purpose they used grown-up white mice. The above-mentioned effect and the oxygen tension in the liver and the spleen were studied at different periods after subcutaneous injection of the following compounds: cysteamine, cystamine, Br.HBr-2-aminoethyl isothiuronium (AET), Br.HBr-2-amino-5-isothiuronium-methyl-thiazolin (AINT), furthermore, HCl.cysteine and SH glutathione. The animals were once totally irradiated with gamma rays of Co⁶⁰ (dose: 900r; dose intensity: 378 r/min, for 2 min 21 sec). They were irradiated 15, 30, 60, 120, and 180 min after the injection. The duration of life was observed within a period of 30 days. Table 1 shows the number of experimental animals. Fig. 1 shows the results obtained with cysteamine. This substance has a considerable protective effect; it does, however, not reduce the O₂ content, but increases it in the spleen. Fig. 2 shows that also cystamine does not reduce the oxygen tension during the duration of the protective effect.

Card 2/4

82526

Study of the Mechanism of the Radioprotective
Action of Some Sulfur Containing Substances

S/020/60/133/04/30/031
B016/B067

In introducing AET 15 min before the irradiation the protective effect becomes distinctly marked (Fig. 3 A). The O_2 content is only slightly reduced. Analogously, AIMT has a weaker effect on the O_2 level; its protective effect is also much weaker and only of a short duration (Fig. 3 B). Cystein (Fig. 4) and SH glutathione tension hardly change the O_2 in both organs, they have, however, a considerable protective effect. From these results the authors draw the conclusion that the protective effect is not caused by tissue hypoxia. At the same time it is assumed that the effect of the above-mentioned protective substances is, nevertheless, connected with the "oxygen effect". Hence, it may be assumed that this effect is not necessarily connected with the radiolysis of water. Perhaps, it may be explained by the formation of potential disturbances in biological objects, which may take place only during the oxidation by molecular oxygen. In this case, the protective effect of the substances under consideration can be related to their capability of preventing the oxidation by molecular oxygen of the "structures" damaged by radiation. The authors thank V. M. Fedoseyev for the synthesis of AET and AIMT. There are 4 figures, 1 table, and 27 references: 7 Soviet, 1 US, 3 Intern. Conf., and Card 3/4

GRAYEVSKIY, E.Ya.; KONSTANTINOVA, M.M.

Radiation protective effect of some agents and the "oxygen effect."
Radiobiologiya 1 no.2:270-277 '61. (MIRA 14:7)

1. Institut morfologii zhivotnykh imeni A.N.Severtsova AN SSSR,
Moskva.
(RADIATION PROTECTION) (OXYGEN—PHYSIOLOGICAL EFFECT)

27.1220

30366
S/205/61/001/005/001/005
D299/D304

AUTHORS: E.Ya. Grayevskiy, and M.M. Konstantinova

TITLE: A study of the mechanism of the protective action of aminoethyl-isothiuronium on rats irradiated in a state of hypothermy

PERIODICAL: Radiobiologiya, v. 1, no. 5, 1961, 650 - 652

TEXT: The lack of defensive action from cysteine after irradiation in animals with a normal metabolism and its presence in chilled hibernating animals tends to indicate that protective compounds, if at all capable of weakening the radiation reaction when introduced after irradiation, can only do this when the development of the radiation reaction is strongly inhibited. To check this assumption a study was made of the protective effect of aminoethyl-isothiuronium (AET) Br.HBr. on animals irradiated in varying states of hypothermy. The experiments were conducted with white mice exposed to single gamma-radiation from a Co⁶⁰ source in a dose of 900 r (LD_{100/15}) at an intensity of 320 r/min. The body temper-

Card 1/3

30366

S/205/61/001/005/001/005
D299/D304

A study of the mechanism of ...

ature of the mice at the time of irradiation in the three test groups was 37, 18, and 6° C. The protective agent was injected subcutaneously at 9-10 mg per mouse in 0.05 ml of distilled water 15 min before irradiation or 10 - 20 sec after it. The number of animals that survived for more than 30 days after irradiation and the life span of those animals which died beyond this period was taken as the criterion of the effectiveness of AET. The results showed that prophylactic injection of AET into mice with a body temperature of 37° C gave a marked increase in the survival rate of the irradiated animals and increased the average life of the animals which died. The prophylactic effect was lower in mice with a body temperature of 18° C. At 6° C no protective action was noted, due perhaps to disturbance of the resorption and admission of the AET to the radiation-sensitive systems or to inhibition of its conversions. The AET was ineffective in all cases when introduced after irradiation. The authors' findings conform to those of D.E. Smith (Ref. 5: Radiation Res., 12, 79, 1960) who found that the administration of cytochrome c after irradiation to animals of the genus Citellus irradiated in a state of hibernation with a body temperature of 5° C had no protective

Card 2/3

20366

S/020/61/136/005/032/032
B103/B208

21.6300

AUTHORS: Grayevskiy, E. Ya. and Konstantinova, M. M.

TITLE: Mechanism of antiradiation effect of dithiols

PERIODICAL: Doklady Akademii nauk SSSR, v. 136, no. 5, 1961, 1219-1222

TEXT: The authors studied the antiradiation effect of dimercapto compounds: 1) of unithiol, and 2) of dimercapto propionic acid (DMPA) on white mice. They compared the efficiency of these dithiols with the hypoxia caused by the latter (due to oxygen tension). There are only few contradictory data available on this problem. The mice were totally irradiated with γ -rays of Co^{60} with a dose of 357 r/min, and with an absolutely lethal dose of 900 r, once for 2 min 28 sec. The mentioned protective substances were injected subcutaneously in 0.5 ml distilled water in the following quantities: unithiol: 20, 14, and 9, DMPA 1.0 and 0.75 mg per animal. Unithiol was applied at 11 intervals between 10 and 180 min, DMPA at 6 intervals between 15 and 180 min prior to irradiation. The criterion of the efficiency was the percentage rate of the surviving animals, and the lifetime of the killed animals up to

Card 1/6

20366

S/020/61/136/005/032/032
B103/B208

Mechanism of antiradiation effect....

that the protective effect of dithiols is probably due to hypoxia caused by these dithiols in organs sensitive to radiation, in contrast with the effect of the best known sulfur-containing compounds (β -mercapto ethyl amine, or 2-aminoethyl isothiuronium-B·HBr, etc.). The formation mechanism of this hypoxia could not yet be explained. There are 2 figures and 8 references: 4 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Institut morfologii zhivotnykh im. A. N. Severtsova
Akademii nauk SSSR (Institute of Animal Morphology imeni
A. N. Severtsov, Academy of Sciences, USSR)

PRESENTED: August 22, 1960, by A. I. Oparin, Academician

SUBMITTED: August 18, 1960

Card 3/6

23818

S/G20/S1/138/CO1/023/C23
B103/B205

27.1220

AUTHOR: Konstantinova, M. M.

TITLE: Radiation-protective effect of lowering the body temperature,
as a result of the hypoxia connected with it

PERIODICAL: Doklady Akademii nauk SSSR, v. 138, no. 1, 1961, 225-226

TEXT: The author explains the question as to whether the protective effect against radiation damages attained by lowering the body temperature during irradiation is due to the direct temperature influence or to the accompanying hypoxia. The published data permitted no definite conclusion. It was, in particular, not clear, whether this hypoxia is, in effect, a consequence of hypothermia. To answer this question, the author studied the effect of lowering the body temperature in mice on the oxygen (O_2)

tension in liver and spleen in vivo, and compared it with the protective effect of the corresponding hypothermia. The survival rate was first determined on cooling without irradiation in parallel with the O_2 tension with the following results:

Card 1/6

23818

3/020/61/139/001/023/023
B'03/B208

Radiation-protective effect of...

O₂ tension

liver 21

spleen 22

Survival rate (number of mice).
body temperature

at 37 °C	at 12° 49
at 16° 50	at 6° 46

Cooling was accomplished in the following way: After introducing 7Y/g aminazine, the animals were put into a refrigerator (10°C). Their rectal temperature was 36°C after 1.5-2 hr. By placing them into thawing ice, their temperature dropped to 12°C after 5-10 min, and to 6°C after 15 min. Normal temperature was restored by warming the cardinal region with circulating water (42°C), and, if necessary, by artificial respiration. Mice with the temperatures mentioned were irradiated with γ-rays of Co⁶⁰ in an absolutely lethal dose (900 r) and a dose intensity of 360 r/min. As the criterion of sensitivity served the survival rate within 30 days. At the same time the O₂ tension was measured polarographically in other

mice. The cathode was a platinum electrode of the "open" type, the anode a silver chloride electrode (according to Ref. 24). These mice were given aminazine as mentioned above after insertion of the electrodes, and were put into ice until the desired temperatures were attained. To judge

Card 2/6

23818

S/020/61/138/001/023/023
B103/B208

Radiation-protective effect of...

increases. A pronounced protective effect became manifest only from a 50 % reduction of O_2 tension in the tissue onwards. It is important that even on considerable temperature drop the protective effect is comparatively small. For at normal body temperature, even a low hypoxia is an effective protection, irrespective of its origin (Ref. 24). This discrepancy might be the result of a damage of the organism caused by low temperatures (see above). The comparatively low survival rate may be due to a summation of radiation and hypothermia effects. Considering the actual effect of cooling alone, the protective effect approaches that in animals with normal body temperature. The protective effect of cooling in warm-blooded animals is thus due to the accompanying hypoxia which may be the result of a more intense suppression of O_2 uptake than it is the case in the oxidation processes in the tissue. This is also the cause of death of cooled warm-blooded animals. In cold-blooded animals, on the other hand, which are adapted to low temperatures, the O_2 metabolism is not disturbed by hypothermia. In these animals, hypothermia will not exert a protective effect. There are 1 figure and 25 references: 5 Soviet-bloc and 20

Card 4/6

GRAYEVSKIY, E.Ya.; KONSTANTINOVA, M.M.

Independence of the radiation protective action of aminoethyl-
isothiuronium · Br · HBr from the "oxygen effect." Dokl. AN SSSR
140 no.3:705-708 S '61. (MIRA 14:9)

1. Institut morfologii zhivotnykh im. A.N.Severtsova AN SSSR.
Predstavleno akademikom N.M.Sisakyanom.
(Pseudourea) (Radiation protection)

KONSTANTINOVA, M. M.

Investigations on Radiation Protection in Mammals

E. Ya. Gerasimov, N. F. Barakina, M. M. Konstantinova and I. D. Smirnova

Radiation protectors varying in their structure and physiological effect can be divided by their mechanism of protective action into two groups. One group acts by causing tissue hypoxia, while the protective action of the second group appears not to be related to the oxygen effect.

Protectors of the second group show a clear morphological protection of animals exposed to radiation, decreasing the damage to the intestine and haemopoietic tissues. Under the action of an example of this group, aminoisobutyronium bromide (AIB), repair processes are accelerated, and fewer chromosomal aberrations are seen and the ability of cells to undergo division is restored, although there is no diminution in the initial number of cells of the intestinal crypts disrupted as a result of irradiation.

Haemopoietic tissue, irradiated in the presence of AIB, shows a greater number of intact cells and regeneration is greatly accelerated.

The intensification of repair processes observed in radiosensitive tissues seems to be determined by a smaller initial damage of their component cellular elements.

Institute of Animal Morphology, Academy of Sciences of the USSR, Moscow

report presented at the 2nd Intl. Congress of Radiation Research,
Harrogate/Yorkshire, Gt. Brit. 5-11 Aug 1962

27.2300

³⁹⁵⁸⁹
S/020/62/145/002/017/018
B144/B180

AUTHOR: Konstantinova, M. M.

TITLE: Effect of the duration of moderate hypothermia on the O₂
pressure in the tissues and on the radiosensitivity of mice

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 145, no. 2, 1962, 436 - 437

TEXT: Groups of mice were kept for 30 and 120 min. at a rectal temperature of 18°C; then: (a) the O₂ pressure was determined in liver and spleen and (b) the radiosensitivity was studied after gamma irradiation with 900 r. The author's methods of hypothermia and polarographic determination of the O₂ pressure have been described previously (DAN, 138, no. 1, 223 (1961);

DAN, 132, no. 6, 1427 (1960)). a) The O₂ pressure was reduced in both organs by ~45% irrespective of the time of hypothermia. b) The radiosensitivity was judged from the average life of mice dying within 30 days and from the survival percentage. The former increased from 6.1 in the control animals to 9.0 and 9.5 days, the latter from 0 to 15 and 7%. Thus,

Card 1/2

Card 2/2

27.2400

L1850
S/205/62/002/004/014/014
I015/I215

AUTHORS: Zeytunyan, K.A., Konstantinova, M.M., and Semenov, L.F.

TITLE: The effect of certain antiradiation agents on the oxygen level in tissues in relation with their effect on the radiosensitivity of animals

PERIODICAL: Radiobiologiya, v.2, no.4, 1962, 616-619

TEXT: This is the continuation of a previous study. The experiments were carried out on albino mice of both sexes, weighing 18-20g. Adrenalin (0.02mg/mouse), acetylcholin (0.6mg/mouse), tryptamine (1.5mg/mouse), serotonin (0.5mg/mouse), phenylethylamine (0.8mg/mouse), thiourea (45.0mg/mouse) and aminoethylisothiocyanate (AET) (3.0mg/mouse) were injected s.c. in aqueous solutions. The oxygen tension in liver and spleen was determined polarographically. The effect of these substances on the oxygen tension was different for spleen and for liver, and varied also with each substance. Acetylcholin brought about the most marked

Card 1/3

S/205/62/002/004/014/014
I015/I215

The effect of certain antiradiation...

Pathology and Therapy, AMS USSR, Sukhumi)

SUBMITTED: February 13, 1962

X

Card 3/3

GRAYEVSKIY, E.Ya.; KONSTANTINOVA, M.M.

Dependence of the radiation protective efficiency of various
substances on the oxygen content of tissues and inhaled air.
Dokl.AN SSSR 145 no.1:195-197 J1 '62. (MIRA 15:7)

1. Institut morfologii zhivotnykh imeni A.N.Severtsova AN SSSR.
Predstavleno akademikom N.M.Sisakyanom.
(RADIATION PROTECTION) (OXYGEN)

KONSTANTINOVA, M.M.

Oxygen tension in the tissues and radiosensitivity of mice as
dependent on the duration of moderate hypothermia. Dokl. AN SSSR
145 no.2:436-437 J1 '62. (MIRA 15:7)

1. Institut morfologii zhivotnykh imeni A.N.Severtsova AN SSSR.
Predstavleno akademikom N.M.Sisakyanom.
(HYPOTHERMIA) (GAMMA RAYS--PHYSIOLOGICAL EFFECT)
(OXYGEN IN THE BODY)

GRAYEVSKIY, E.YA; BARAKINA, N.F.; KONSTANTINOVA, M.M.; SMIRNOVA, I.B.

Studies on radiation protection in mammals. Zhur. ob. biol.
24 no.3:182-193 My-Je'63. (MIRA 16:8)

1. A.N.Severtzov Institute of Animal Morphology, Academy of
Sciences of the U.S.S.R., Moscow.
(RADIATION-PROTECTIVE AGENTS)

GRAYEVSKIY, E.Ya.; KONSTANTINOVA, M.M.; NEKRASOVA, I.V.; TARASENKO,
A.G.

Mechanism of the radioprotective action of cystamine (2-aminoethyl-
disulfide). Radiobiologiya 3 no. 6:891-897 '63. (MIRA 17:7)

1. Institut morfologii zhivotnykh imeni A.N.Severtsova AN
SSSR, Moskva.

ACCESSION NR: AP4027966

S/0205/64/004/002/0197/0202

AUTHOR: Grayevskiy, E. Ya.; Zherobchenko, P. G.; Konstantinova,
M. M.; Sokolova, O. M.; Shevchenko, A. N.

TITLE: Relation of radioprotective activity of indolylalkylamines to
tissue hypoxia and the role of vascular changes in its development

SOURCE: Radiobiologiya, v. 4, no. 2, 1964, 197-202

TOPIC TAGS: radioprotective action mechanism, indolylalkylamine
radioprotective action, tissue hypoxia, vessel spasm, tryptamine
derivative, radioprotective preparation, 4-,5-chlortryptamine,
4-,5-metoxytryptamine, serotonin, alpha-methyltryptamine, LSD,
cystamine, oxygen intensity, cystamine radioprotective action

ABSTRACT: Literature studies have established that indolylalkylamine
radioprotective action is related to tissue hypoxia. This work
investigates the mechanism of this action by determining 1) whether
the position of a substitute in a tryptamine molecule affects its
capacity to produce tissue hypoxia, 2) how the introduction of
alpha-methyltryptamine and LSD affects the hypoxic and vasoconstrictive

Card 1/3

ACCESSION NR: AP4027966

action of the preparations, and 3) how the combined use of 5-metoxytryptamine and cystamine affect oxygen level and vessel reaction in tissues. The following preparations were administered intraperitoneally to experimental white mice: 4-chlortryptamine (60 mg/kg), 5-chlortryptamine (60 mg/kg), 4-metoxytryptamine (60 mg/kg), 5-metoxytryptamine (60 mg/kg), and serotonin (50 mg/kg) 1 hr after administering alpha-methyltryptamine, cystamine (150 mg/kg) combined with metoxytryptamine (50 mg/kg), and LSD (10 mg/kg) combined with serotonin. Oxygen intensity in the liver and spleen of the animals was measured by a polarographic method. Vessel tone was determined by the accumulation of neutral red in the organs 30 min after being introduced (65 mg/kg in a 0.5 ml physiological solution). Findings show that tryptamine derivatives with substitutes in the fifth position (5-metoxy-, 5-chlortryptamine) are highly effective radioprotectors because of their capacity to produce hypoxia in radiosensitive organs by vessel spasms. Tryptamine derivatives with substitutes in the fourth position (4-chlor-, 4-metoxytryptamine) do not produce hypoxia or vessel spasms and are ineffective radioprotectors. Alpha-methyltryptamine and LSD remove the radioprotective effect of indolylalkylamines by preventing the development of vessel spasm and subsequent tissue hypoxia. Cystamine enhances the

Card 2/3

ACCESSION NR: AP4027966

radioprotective action of tryptamine derivatives, but does not affect their capacity to constrict vessels and to develop hypoxia. The radioprotective action mechanisms of cystamine and the investigated indolylalkylamines differ. Orig. art. has: 4 figures, 2 tables.

ASSOCIATION: None

SUBMITTED: 06Apr63

DATE ACQ: 28Apr64

ENCL: 00

SUB CODE: AM

NO REF SOV: 013

OTHER: 008

Card 3/3

ACCESSION NR: AP4027969

S/0205/64/004/002/0216/0220

AUTHOR: Konstantinova, M. M.; Tarasenko, A. G.; Fedoseyev, V. M.

TITLE: Investigation of the antiradiation activity of N-alkyl derivatives of 2,3-dimercaptopropylamine and their action mechanism

SOURCE: Radiobiologiya, v. 4, no. 2, 1964, 216-220

TOPIC TAGS: radioprotective action mechanism, dithiol group, N-alkyl derivative, 2,3-dimercaptopropylamine, synthetic N-alkyl derivative, oxygen intensity, tissue hypoxia, dithiol radioprotective action, mercapto, gamma radiation, lethal dose, radiation sickness, increased radioresistance

ABSTRACT: This study investigates the N-alkyl derivatives of 2,3-dimercaptopropylamine, there being little data in the literature on the radioprotective action of substances containing sulfur, especially the dithiol groups. These derivatives, synthesized for the first time by the authors, were studied in relation to their effect on oxygen intensity in the tissues. Experimental white mice were gamma-irradiated (Co^{60} , 270-280 r/min) with single 900-r doses

2/01
Card

L 3452-66 EWT(m)

ACCESSION NR: AP5024008

UR/0020/65/164/002/0441/0444

AUTHOR: Grayevskiy, E. Ya.; Konstantinova, M. M.; Sokolova, O. M.; Tarasenko, A. G.

TITLE: On the common mechanism underlying the radiation protective properties of aminothiols and anoxia

SOURCE: AN SSSR. Doklady, v. 164, no. 2, 1965, 441-444

TOPIC TAGS: radioprotective agent, reaction mechanism, tissue physiology, anoxia, organic sulfur compound

ABSTRACT: The work attempts experimental verification of the hypothesis that the basic mechanism of these radioprotective effects is related to an increased level of free sulfhydryl groups in the tissues. White mice aged 8-12 weeks were irradiated with 900 r (LD_{100/30}) and were kept in glass containers to facilitate change of air. The following aminothiols were injected subcutaneously 15-30 minutes before irradiation or before sulfhydryl group determination: cystamine, cystamine, β -mercaptopropylamine, and serotonin. Radioprotection was determined according to survival beyond 30 days. A spleen homogenate was used for sulfhydryl determination with mercuric chloride under argon or air. It

Card 1/2

L 3452-66

ACCESSION NR: AP5024008

2
was found that all the agents which have a radioprotective effect caused considerable (10-35%) increase (compared to control levels) of the groups in spleen homogenate under argon. Some increase of sulfhydryl groups in air was seen only for cystamine. If the mice breathed oxygen immediately before and during irradiation, the aminothioli radioprotective effect decreased somewhat, as did the content in the sulfhydryl groups. This was shown to be unrelated to inactivation through oxidation of the protectant. It is concluded that the predominant mechanism of radioprotection is related to an increase of highly reactive endogenous sulfhydryl groups, due probably to lesser oxidation and spontaneous reduction of the S-S bonds. These appear to be highly mobile groups in low molecular compounds which are inactive products of radiolysis of the biomacromolecules. Orig. art. has: 3 tables

ASSOCIATION: Institut morfologii zhivotnykh im. A. N. Severtsova Akademii nauk SSSR (Institute of Animal Morphology, Academy of Sciences SSSR)

SUBMITTED: 15Mar65

NR REF SOV: 007

ENCL: 00

OTHER: 009

SUB CODE: LS 55

BVA
Card 2/2

33115
S/638/61/001/000/042/056
B108/B138

24.6600
AUTHORS:

Konstantinova, M. P., Myakinin, Ye. V., Romanov, A. M.,
Tsareva, T. V.

TITLE:

Angular distribution of protons from $C^{12}(\alpha, p)N^{15}$ with
14.5-Mev alphas

SOURCE:

Tashkentskaya konferentsiya po mirnomy ispol'zovaniyu atomnoy
energii. Tashkent, 1959. Trudy. v. 1. Tashkent, 1961,
262-267

TEXT: A study of the angular distribution of protons from (α, p) reactions
may give insight into the direct interaction between alphas and nucleons.

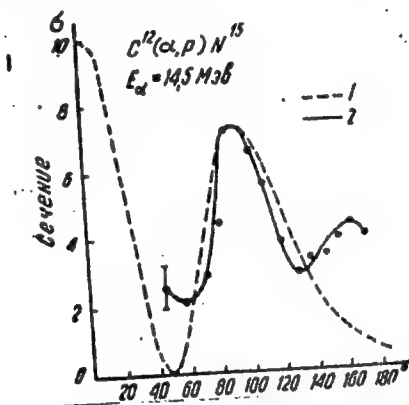
The authors studied the $C^{12}(\alpha, p)N^{15}$ reaction with alpha particles of an
energy of 14.5 Mev, obtained from the cyclotron at the Physicotechnical
Institute (see Association entry). The target consisted of a gold foil
(0.25 mg/cm²) covered with a thin layer of carbon black. The differential
cross section of the above reaction with N^{15} in the ground state was
determined from the histograms of the proton tracks (Fig. 3). The overall
error was about 10%. Experiments with a carbon target without gold

Card 1/3

Angular distribution of protons ...

ASSOCIATION: Fiziko-tekhnicheskiy institut AN SSSR (Physicotechnical Institute AS USSR)

Fig. 3. Angular distribution of protons from $C^{12}(\alpha, p)N^{15}$ at alpha energy 14.5 Mev. Legend: abscissa - differential reaction cross sections. (1) Calculated, (2) experimental.



Card 3/3

TSAREVA, T.V.; ROMANOV, A.M.; MYAKININ, Ye.V.; KONSTANTINOVA, M.P.

¹²
C (α ,p)¹⁵N

reaction of 13,6 Mev. alpha particles. Izv. AN Uz. SSR.
Fiz.-mat. nauk no.1:84-85 '61. (MIRA 14:3)

1. Fiziko-tekhnicheskiy institut AN SSSR.
(Alpha rays) (Nuclear reactions)

ROMANOV, A.M.; MYAKININ, Ye.V.; KONSTANTINOVA, M.P.

Ne²² levels excited in the reaction F19 (α , p)Ne²².

Izv. AN SSSR. Ser. fiz. 25 no.9:1135-1137 '61. (MIRA 14:8)

1. Fiziko-tekhnicheskiy institut AN SSSR.
(Neon--Isotopes)
(Nuclear reactions)

KONSTANTINOVA, M.P.; MYAKININ, Ye.V.; ROMANOV, A.M.; TSAREVA, T.V.

Elastic scattering of 10 - 15 mev. α -particles on gold and aluminum.
Zhur. eksp. i teor. fiz. 41 no. 1:49-51 J1 '61. (MIRA 14:7)

1. Leningradskiy fiziko-tekhnicheskiy institut AN SSSR.
(Alpha rays—Scattering) (Cyclotron)

ROMANOV, A.M.; MYAKININ, Ye.V.; KONSTANTINOVA, M.P.

Excited levels of Ne^{22} . Zhur.eksp.i teor.fiz. 41 no.1:64-65 J1
'61. (MIRA 14:7)

1. Leningradskiy fiziko-tehnicheskii institut AN SSSR.
(Neon—Isotopes) (Nuclear reactions) (Protons—Spectra)

S/056/62/043/002/006/053
B102/B104

AUTHORS: Konstantinova, M. P., Myakinin, Ye. V., Petrov, A. M.,
Romanov, A. M.

TITLE: Angular distributions of protons from (α, p) -reactions induced
by alpha particles of 13-15 Mev

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43,
no. 2(8), 1962, 388 - 393

TEXT: To study the mechanism of (αp) direct interaction, the authors determined the energy and angular distributions of protons from the reactions $\text{Li}^6(\alpha, p)\text{Be}^9$, $\text{Li}^7(\alpha, p)\text{Be}^{10}$, $\text{F}^{19}(\alpha, p)\text{Ne}^{22}$, and $\text{Al}^{27}(\alpha, p)\text{Si}^{30}$ at $E_\alpha = 13-15$ Mev. The experimental arrangement was the same as that described in ZhETF, 39, 1540, 1960. The charged particles were recorded by η -2 (Ya-2) nuclear emulsion plates. The plates were arranged so as to comprise the angle intervals 10-50, 50-90, 80-140, and 130-170°. In the c.m.s. all angular distribution curves $\sigma(\theta)$ show: (1) several maxima and

Card 1/2

S/056/62/043/002/006/053
B102/B104

Angular distributions of protons ...

minima; (2) asymmetry with respect to $\theta = 90^\circ$; and (3) an increase of σ for large proton emission angles ($\theta > 120^\circ$). These results agree with those of analogous reactions at $E_\alpha = 18-40$ Mev. The characteristic features of the $\sigma(\theta)$ curves indicate the importance of direct interaction between nucleus and α -particles. The residual nuclei of the reactions $F^{19}(\alpha, p)Ne^{22}$ and $Al^{27}(\alpha, p)Si^{30}$ at $E_\alpha = 13-15$ Mev are mainly in the excited state. The intensity of the p_0 proton group ($Li^6(\alpha, p)Be^9$; $Li^7(\alpha, p)Be^{10}$) is less than that of the p_1 and p_2 groups ($F^{19}(\alpha, p)Ne^{22}$; $Al^{27}(\alpha, p)Si^{30}$). The p_2 angular distribution of the F^{19} reaction does not contradict the assumption that the second excited level in Ne^{22} is a 2^+ level. There are 6 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe Akademii nauk SSSR (Physicotechnical Institute imeni A. F. Ioffe of the Academy of Sciences USSR)

SUBMITTED: February 23, 1961

Card 2/2

S/903/62/000/000/005/044
B102/B234

AUTHORS: Tsareva, T. V., Romanov, A. M., Myakinin, Ye. V.,
Konstantinova, M. P.

TITLE: The (α, p) -reaction on carbon and the anomalies arising at
 α -particle energies of 10 - 15 Mev

SOURCE: Yadernyye reaktsii pri malykh i srednikh energiyakh; trudy
Vtoroy Vsesoyuznoy konferentsii, iyul' 1960 g. Ed. by
A. S. Davydov and others. Moscow, Izd-vo AN SSSR, 1962, 123-132

TEXT: The reaction $C^{12}(\alpha, p)N^{15}$ was investigated with the aim of determining
the role of the various possible mechanisms of direct interaction and the
reaction $Al^{27}(\alpha, p)Si^{30}$ in order to obtain data on the high energy levels of
 Si^{30} and on the role of the direct mechanisms in Si^{30} formation in the ground
and first excited states. The experiments were made with the α -beam of the
cyclotron of the FTI AN SSSR with 100- μ λ -2 (Ya-2) emulsion plates and
targets enclosed in a spherical brass chamber (500 mm diam). The angular
distribution measurements were made in the intervals 10-50, 50-90, 80-140
and 130-170° (lab system). The proton angular distributions for the $C^{12}(\alpha, p)$
Card 1/3

S/903/62/000/000/005/044
B102/B234

The (α, p) -reaction on...

reaction were made with soot targets on 0.25 mg/cm^2 gold foils and a $120\mu\text{Al}$ filter which served for eliminating the elasticity scattered alphas and the proton groups corresponding to formation of N^{15} nuclei in excited states. The experimental results are compared with theoretical considerations based on the formula for $d\sigma/d\Omega$ derived by Austern et al. (Phys. Rev., 92, 350, 1953), the wave vector of the recoil nucleus is determined from the masses and the wave vectors of the particles involved. The theoretical curve describes qualitatively the angular distribution measured. The Si^{30} levels excited in (α, p) reactions are determined and compared with published data (Proc. Phys. Soc., 73, 793, 1959; Bull. Amer. Phys. Soc., 1, 280, 1956; Phys. Rev., 76, 624, 1949). The results are given in the table. Also the angular distribution of the protons from the reaction $\text{Al}^{27}(\alpha, p)\text{Si}^{30}$ was determined; the Al target foils were 0.5 mg/cm^2 thick and were exposed to long-time bombardment. The reaction cross section in the interval $40-120^\circ$ was almost independent of the angle and lay between 15 and $20 \mu\text{b/steradian}$ ($E_\alpha = 14.7 \text{ Mev}$). The shape of the angular distribution in the interval $50 - 140^\circ$ was only weakly dependent on E_α . The distribution

Card 2/3

20-118-4-20/61

AUTHOR: Konstantinova, M. S.

TITLE: The Influence of γ -Rays on the Rate of Dye Accumulation in Living Reticular Endothelial Elements
(Vliyanie gamma-luchey na intensivnost' nakopleniya prizhiznennykh krasiteley retikulo-endotelial'nykh elementami)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 118, Nr 4, pp. 698-700 (USSR)

ABSTRACT: At the beginning, the author shortly refers to previous papers dealing with the same subject, which, moreover, lead to widely differing results. The author here investigates the time dependence of the modification of the functional state of the reticular endothelium in an irradiated organism and its dependence upon the radiation dose. The experiments were conducted with 33 rabbits of both sexes with a weight of from 1,5 to 3,5 kg. 22 of them were jointly subjected to one single irradiation. Co60 served as radiation source with a radiation power of 2,9 roentgen per second. The radiation doses amounted to 800, 400, 100,

Card 1/4

APPROVED FOR RELEASE: 06/19/2000

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The Influence of γ -Rays on the Rate of Dye Accumulation in Living Reticular Endothelial Elements

50 and 25 r. The rabbits were killed 1,3,7 and 9 days after irradiation. All animals received an intravenous injection of a 0.5 percent solution of trypan blue. The 11 animals serving as control received the same amount of dye, they were, however, not irradiated. The lymphatic glands and parts of the spleen were taken for the microscopic investigations. The results of the experiments are compiled in a table. The data obtained here speak in favor of the existence of a general reaction to a radiation effect. No accumulation of dye is found in the reticular endothelium of the lymphatic glands one day after an irradiation with 800 roentgen. After from 3 to 7 days the accumulation of dye in test and control animals differs only slightly. 9 days after an irradiation with 800 roentgen the accumulation of trypan blue is considerably increased in comparison to the control animals. The dye was accumulated in the reticular cells and in the endothelium of the sinus (sinus) and vessels. The intensity of dye accumulation increases considerably subject to the influence of a radiation dose of 100 r. The intensity of the

Card 2/4

KONSTANTINOVA, M.S.

Distribution of carboxyl and sulfhydryl groups of proteins in the spleen tissue of mice under normal conditions and after irradiation.
TSitologiya 3 no.3:293-299 My-Je '61. (MIRA 14:6)

1. Laboratoriya gistofiziologii Instituta evolyutsionnoy fiziologii AN SSSR, Leningrad.

(GAMMA RAYS--PHYSIOLOGICAL EFFECT) (PROTEINS)
(SPLEEN)

KONSTANTINOVA, M.S.; MAZINA, T.I.; REYDLER, M.M.

Effect of ionizing radiation on the functional state of the
reticuloendothelial system. Fiziol.zhur. 47 no.2:226-229 F '61.
(MIRA 14:5)

1. From the Sechenov Institute of the Evolutionary Physiology,
U.S.S.R. Academy of Sciences, Leningrad.
(RETICULOENDOTHELIAL SYSTEM) (X RAYS—PHYSIOLOGICAL EFFECT)

KONSTANTINOVA, M.S.

Role of sympathetic innervation in neurosecretory processes of the
hypothalamo-hypophyseal system. Dokl. AN SSSR 140 no.6:1431-1433
O '61. (MIRA 14:11)

1. Institut evolyutsionnoy fiziologii im. I.M.Sechenova AN SSSR.
Predstavleno akademikom V.N.Chernigovskim.
(NERVOUS SYSTEM, SYMPATHETIC) (PITUITARY BODY) (HYPOTHALAMUS)

KONSTANTINOVA, M.S.; MOISEYEV, Ye.A.

Role of the sympathetic nervous system in the neurosecretory processes
in amphibians. Dokl. AN SSSR 149 no.4:963-965 Ap '63.

(MIRA 16:3)

1. Institut evolyutsionnoy fiziologii im. I.M.Sechenova AN SSSR.
Predstavleno akademikom V.N.Chernigovskim.
(NERVOUS SYSTEM, SYMPATHETIC) (NEUROCHEMISTRY)

KREPS, Ye.M., otv. red.; VERZHBINSKAYA, N.A., red.; VOSKRESENSKAYA, A.K., red.; ZHUKOV, Ye.K., red.; ZAGORUL'KO, T.M., red.; ITINA, N.A., red.; KARAMYAN, A.I., red.; KARMANOVA, I.G., red.; KONSTANTINOVA, M.S., red.; TITOVA, L.K., red.

[Evolution of the functions; physiological, biochemical and structural foundations of the evolution of the functions. Festschrift for the 80th anniversary of Academician L.A.Orbeli] Evoliutsiia funktsii; fiziologicheskie, biokhimicheskie i strukturnye osnovy evoliutsii funktsii. Sbornik posviashchennyi 80-letiu akademika L.A.Orbeli. Moskva, Izd-vo "Nauka," 1964. 290 p. (MIRA 17:6)

1. Akademiya nauk SSSR. Institut evolyutsionnoy fiziologii.
2. Chlen-korrespondent AN SSSR (for Kreps).

KREPS, Ye.M., otv. red.; VERZHBINSKAYA, N.A., red.; VINNIKOV, Ya.A., red.; VOSKRESENSKAYA, A.K., red.; ZHUKOV, Ye.K., red.; ZAGORUL'KO, T.M., red.; ITINA, N.A., red.; KARAMYAN, A.I., red.; KARMANOVA, I.G., red.; KONSTANTINOVA, M.S., red.; PLISETSKAYA, E.M., red.

[Functional evolution of the nervous system] Funktsional'naya evoliutsiya nervnoi sistemy. Moskva, Nauka, 1965. 189 p. (MIRA 19:1)

1. Akademiya nauk SSSR. Institut evolyutsionnoy fiziologii i biokhimii.

MOISEYEV, Ye.A.; KONSTANTINOVA, M.S.

Effect of protracted action of small X-ray doses on the
hypothalamohypophyseal system. Probl. endok. i gorm. 11
no.4:68-73 J1-Ag '65. (MIRA 18:11)

1. Laboratoriya gistofiziologii (zav.- kand. biolog. nauk
Ye.A. Moiseyev) Instituta evolyutsionnoy fiziologii i biokhimii
imeni Sechenova (dir.- chlen-korrespondent AN SSSR Ye.M. Kreps)
AN SSSR, Leningrad.

KONSTANTINOVA, M.S.; MOISEYEV, Ye.A.

Change in the basophils of the anterior lobe of the hypophysis in rats following the extirpation of upper neck sympathetic ganglia. Izv. AN SSSR Ser. biol. 30 no.1:113-118 Ja-F '65. (MIRA 18:2)

1. Sechenov Institute of Evolutionary Physiology and Biochemistry of Academy of Sciences of the U.S.S.R., Leningrad.

KONSTANTINOVA, M.S.

Hypothalamohypophyseal neurosecretion following adrenaline and
acetylcholine injections in rats. Dokl. AN SSSR 165 no.4:974-
976 D '65. (MIRA 18:12)

1. Institut evolyutsionnoy fiziologii i biokhimii im.
I.M.Sechenova AN SSSR. Submitted January 13, 1965.

BIRYUKOVA, N.,; CHERNYAK, A., vrach; GRACHEVA, A., strakhovpy
delegat; KULAKOVA, V., tkachikha; KONSTANTINOVA, N., dovarennyy
vrach; KHMELEVA, V.

Payments out of state funds are not "a burden." Okh.truda i
sots.strakh. 5 no.1:24-25 Ja '62. (MIRA 15:2)

1. Zamestitel' nachal'nika medsanchasti Gus'-Khrustal'nogo
zavoda imeni Dzerzhinskogo (for Biryukova). 2. 2-ya
Kovrovskaya bol'nitsa (for Chernyak). 3. Vladimirsкая
kontora svyazi (for Gracheva). 4. Karabanovskiy tekstil'nyy
kombinat (for Kulakova). 5. Moskovskiy gorodskoy sovet
professional'nykh soyuzov (for Konstantinova). 6. Spetsial'nyy
korrespondent zhurnala "Okhrana truda i sotsial'noye
strakhvaniye" (for Khmeleva).
(Vladimir Province—Medicine, Industrial)

KONSTANTINOVA, N.A.

Ecology and relative abundance of carp in the lower course of the
Volga River in 1957-1959. Zool. zhur. 40 no.6:873-881 Ja '61.
(MIRA 14:6)

1. Stalingrad Section of the State Institute of Lake and River
Fishery Management.

(Stalingrad Reservoir region--Carp)

NIKIFOROVA, K.V.; RENGARTEN, N.V.; KONSTANTINOVA, N.A.

Quaternary formations in the southern area of the European part
of the U.S.S.R. Biul. Kom. chetv. per. no.30:3-25 '65.
(MIRA 19:2)

RENGARTEN, N.V.; KONSTANTINOVA, N.A.; NIKIFOROVA, K.V., otv. red.;
PEYVE, A.V., akademik, glavnyy red.; KUZNETSOVA, K.I., red.;
MENNER, V.V., red.; TIMOFEYEV, P.P., red.

[Role of facies-mineralogical analysis in the reconstruction
of the Quaternary climate; as revealed by a study made in
southern Moldavia and the southwestern Ukraine.] Rol'
fatsial'no-mineralogicheskogo analiza v rekon - struktsii
klimata antropogena. Moskva, Nauka, 1965. 120 p. (Akademiia
nauk SSSR. Geologicheskii institut. Trudy, no.137)
(MIRA 18:11)

KONSTANTINOVA, N.A.

Find of remains of Archidiskodon gromovi Garutt et Alexeeva
from Lower Levantine (Lower Pliocene) sediments in the
southwestern part of the U.S.S.R. Biul. Kom. chetv. per.
no.30:171-175 '65. (MIRA 19:2)

KONSTANTINOVA, N. A.

KONSTANTINOVA, N. A. -- "The Dynamics of the Basic Biological Indexes of Bream in the Northern Portion of the Aral Sea (The Biological Basis for a Rational Utilization of the Stock of Bream)." Moscow Order of Lenin and Order of Labor Red Banner State U imeni M. V. Lomonosov, Soil Biology Faculty. Moscow, 1955. (Dissertation for the Degree of Candidate of Biological Sciences.)

SO: Knizhnaya letopis', No. 4, Moscow, 1956

KONSTANTINOVA, N.A.

Data on Sevan trout stock during 1948-1949. Trudy Sevan.gidregiel.
sta. 14:77-120 '55. (MLRA 9:8)
(Sevan, Lake--Trout)

KONSTANTINOVA, N.A.

Dynamics of principal biological indices of bream in the northern part
of the Aral Sea. Vop. ikht. no.10:60-89 '58. (MIRA 11:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut morskogo rybnogo
khozaystva i okeanografii.
(Aral Sea--Bream)

NIKIFOROVA, K.V.; GERBOVA, V.G.; KONSTANTINOVA, N.A.

Stratigraphy of continental Cenozoic sediments in central Kazakhstan and their correlation with equivalents in the Urals, Turgay Gates, northern Aral Sea region, and the southern part of the West Siberian Plain. Trudy GIN no.26:204-247 '60. (MIRA 13:12)

(Kazakhstan—Geology, Stratigraphic)

DOBRYNIN, G.K.; KONSTANTINOVA, M.A., inzh., retsenzent; FILIPPOV, S.D.,
inzh., red.; KUTKOVA, G.M., tekhn.red.

[Painting machinery for delivery to tropical countries;
experience of the Ural Heavy Machinery Plant] Okraska mashin-
nogo oborudovaniia, postavliaemogo v strany s tropicheskim
klimatom; iz opyta Ural'skogo zavoda tiashelogo mashinostroeniia.
Sverdlovsk, TSentr.biuro tekhn.informatsii, 1959. 38 p.

(MIRA 14:4)

1. Russia (1917- R.S.F.S.R.) Sverdlovskiy ekonomicheskii admi-
nistrativnyy rayon. Sovet narodnogo khozyaystva.
(Sverdlovsk--Painting, Industrial)

KONSTANTINOVA, N.A.

Significance of the high-water period in seasonal dynamics of biological indices of some fish species in the lower course of the Volga River. Trudy sov. Ikht. kom. no.13:420-426 '61.

(MIRA 14:8)

1. Stalingradskoye otdeleniye Gosudarstvennogo nauchno-issledovatel'skogo instituta ozernogo i rechnogo rybnogo khozyaystva GosNIORKh.

(Volga River--Fishes)

KONSTANTINOVA, N.A.

Structure of continental Quaternary deposits in southern Moldavia
and adjacent regions of the southern Ukraine. Dokl. AN SSSR 140
no.1:189-192 S.O '61. (MIRA 14:9)

1. Geologicheskii institut AN SSSR. Predstavleno akademikom D.I.
Shcherbakovym.
(Moldavia--Geology, Stratigraphic) (Ukraine--Geology, Stratigraphic)

KONSTANTINOVA, N.A.

Adaptive changes of the biological indices of the floodplain and river fishes of the lower Volga River during the construction of Volgograd Reservoir. Vop. ikht. 2 no.2:247-261 '62. (MIRA 15:11)

1. Volgogradskoye otdeleniye Gosudarstvennogo nauchno-issledovatel'skogo instituta ozer'nogo i rechnogo rybnogo khozyaystva.
(Volga River--Fishes)